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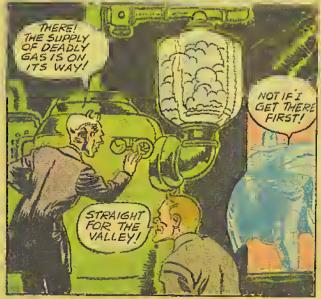


















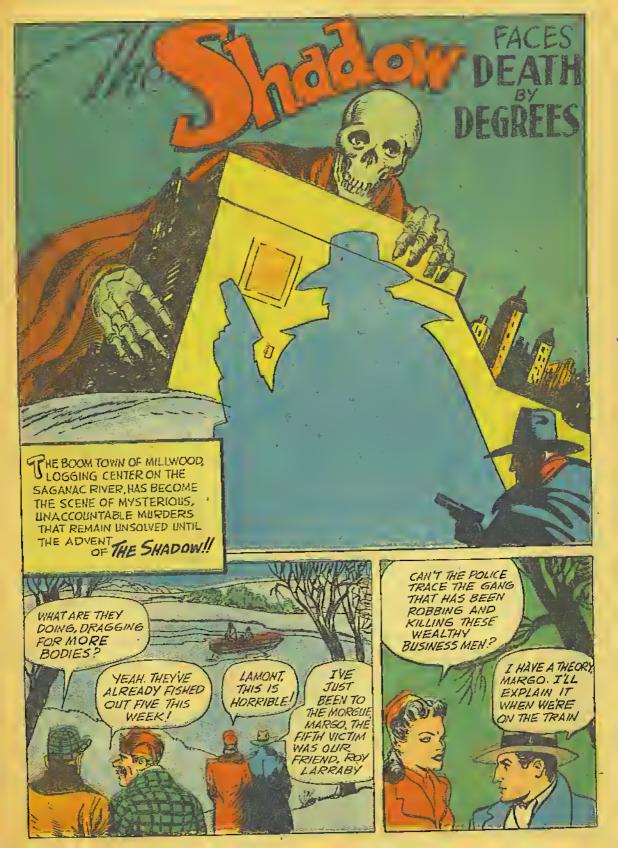


















































































DOWN IN THE CELLAR OF THE HOUSE UNDER THE RIVER A WINDOW REVEALS THE TURBULENT MISSISSIPPI-

SO-THAT'S THE



















### BACK AT DOC'S LABORATORY

SOMEPLACE IN
LAKE MICHIGAN, THERE
IS ANOTHER ATOMSMASHER WHICH WE'LL
HAVE TO FIND. THAT'S
WHAT SANK YOUR SHIP!

WILD AND AIMED HIS
CYCLOTRON AT THE
MISSISSIPPI. THE
WATER'S MOLECULE
MAKE-UP CHANGED,
WE'LL
AND THIS FREAK
WATER POURED
SHIP!
DOWN THE
RIVER.



#### FOOTNOTE:

BUT MONK DOESN'T KNOW WHAT THESE PROPERTIES ARE --- IF YOU DON'T ETHER, WE REPRINT AN ITEM FROM THE SCIENCE PASE OF THE N.Y.

IT MES - OCTOBER 2,1945

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# VIGNETTES-THE RUBBER SHORTAGE



# THERE'S BURIED TREASURE IN STORE!

Not the gold of Captain Kidd-but the treasure that's waiting in the new issues of these camic books. Loak at these samples of what's waiting far yau!



## NIGHTMARES COME TO LIFE!

Only Thade—hated Master of Death—could devise this incredible dream machine, producing living, solid phantams. Your own dreams could kill you . . . and only The Shadow could stand between Thade and you . . . and you . . . and you! You'll chill and thrill to the latest and most horrible experience known to man . . . the dream machine . . . invented by Thade . . . in April

SHADOW COMICS-ON SALE JANUARY 28th

At All Newsstands

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THE GREAT MERLIN AGAINST THE GREAT BLACKSTONE!

Set against a flaming volcane en a strange island, founded by multineers, a strange adventure awaiti the greatest magician in the world -Blackstone!

Far there on the island is the man who claims to be Merlin, peerless wizord of the days of King Arthur. Could this be so-and could Merlin mean ruin for Blackstone? You'll find the answer in the big March issue of

SUPER-MAGICIAN COMICS -ON SALE JANUARY 18th At All Newsstands 10c a Copy



Yes, it's true. After the war, when the family goes aut for a drive Sunday, it will be through the skies... in a plane. And wait till you see all the new devices that will make flying safe and popular... and wait till you read all the things drivers will have to wotch aut for in the air! Plus new and exciting comic features and stories, in the great new May issue of

AIR ACE-ON SALE FEBRUARY 11TH

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Unafraid, undefected, the Men of 1955 rejects big-game hunting in favor of even bigger game ... bank robbers!

Will Supersnipe fool the robbers? Will the robbers fool Supersnipe? Will Herlock Domes, the dountless detective, carry on with his unblemished record of mishaps?

Yau'll want to find out all the answers to these baffling problems in the April issue of

SUPERSNIPE-ON SALE

10c a Copy At All Newsstands



In the previous installment (the first) of this series on fingerprints, we explained the equipment necessary for taking prints, and general method of operation. The first, or "plain" form of taking impressions, was explained.

There is another method of taking printsa method more complete and therefore more difficult. It is called the "rolled" impression. getting its name from the fact that the finger is "rolled" from one side to another in order to get the complete surface print, instead of only the "bulb" print which is the result of a plain impression.

The rolled impression becomes important when you realize that a plain impression is often misleading. The appearance of a plain impression may lead one to classify the print as a loop, while the completed rolled impression will show that it is really a whorl.

It is natural, then, that the rolled impression get most of the attention, and are given preference over plain impressions. They are the ones to be used for complete classification, and must be as perfect as it is possible to make

The preparations for taking rolled impressions are the same as for taking plain impressions. Have your ink plates ready; be sure that your ink is spread thinly and evenly, so as not to clog up. Have the skin of the fingers to be printed entirely clean and dry, and free from any trace of foreign matter. Greasy spots will be reflected more in rolled impressions than in others.

Rolled impressions start with the thumb, and continue through the index, middle, ring - bone, which is on the little finger side. S

and little finger. The right hand is first.

Stand the subject in front of the inking plate, about a forearm length away. Have the plate and the card on which impressions are to be made horizontal with the arm.

Now, take the bulb of the thumb and put in on the inking plate so that the fingernail is at right angles to the inking plate-the bulb of the thumb facing out. Then turn the thumb over until it reaches the opposite position, with the other side of the nail in right angles to the inking plate. This will give the entire surface of the thumb a smooth, clear coating

Follow this same process with all of the fingers of both hands in inking.

In recording the prints of rolled impressions, the same procedure should be followed The full coverage should be printed in the spaces allowed for the separate-fingers. Especial care should be taken in recording the little finger of each hand, for from these impression it is possible to make a subclassification of the prints.

When taking rolled impressions, the work will be found to go with more smoothness an flexibility, if the physical structure of the arr is taken into consideration, and the natural an unnatural positions dealt with intelligently.

Always begin taking the roll from the pos tion which seems most unnatural, following through so that the finger is in the easier more natural position when roll is complete The bone of the forearm which is on the "thumb" side is termed the "radius" bon because it revolves with ease about the "ulna in taking the prints, place the fingers so that the radius bone revolves around the ulnar. Then, with the fingers resting in their most natural position when the roll or print is completed, they can be lifted off without danger of smudging or blurring.



In taking rolled impressions, the degree of pressure exerted both in inking and taking the prints is very important. As in the case of plain impressions, practice is the thing which makes one more efficient in this work, but having the subject's hands entirely relaxed is a big help.

The rolled impression is assuming more and more importance in modern fingerprint records. It is absolutely essential in the One Finger system—a simplified form of keeping records with less trouble and space than required in the full system, and much quicker to identify. The One Finger system is, of course, not as absolutely correct as the complete record, but is proving itself more and more useful as a commercial method, if not especially so for criminal work.

#### III. CLASSES OF PRINTS

Previous installments of this series of articles on fingerprints have shown the equipment necessary for taking prints and the two methods used—plain and rolled impressions—in making the impressions for records. These two steps are parts of the one angle of the science of fingerprints—the angle of identification. The method of finding the prints left on the scene of the crime, of developing these prints so that they are able to be reproduced for study, belongs to the other part of this study, and will be given its due share of attention.

Anyone who has even the slightest knowledge of fingerprints knows that the basis of identification by this system is the fact that not two prints are alike. It is by comparison, by thecking one print against another, that identification is established. Now, just how is this done?



On file at the Bureau of Investigation in. Washington are about three million prints, with more being added every day. Suppose that your local police were to find prints left at the scene of a crime, and wished to check up on the culprit, how would they learn the identity of the criminal?

If the police department in your home town has a file of prints, they would check on those first. If they could not find the print in their own file, it would be sent to the State offices, then to Washington—or else directly to Washington. Yet in each case, the print would have to be compared with thousands upon thousands of prints, and since one person's finger-print seems so much like another's, how would it be possible to determine the difference in any reasonable time?

The method of comparing one print with all the others would prove hopeless. It would take years to get anywhere with this system. Since our modern methods of crime fighting cannot wait that long for proper identification, a quicker, more efficient system has been perfected. All prints, as soon as they are made, are filed under the proper classification, with sub-filing under variations of their own class. This filing is done in such perfection that it takes only minutes for any efficient clerk to gather prints which are fairly close to the one submitted.

And even better than that, the files are so arranged that a mechanical machine can select these cards automatically, so that the actual identification can be speeded up even more.

The classes of fingerprints are divided into four types: Loops, Arches, Whorls and Composites. These designations show the type of print and further divided into subclassifications of their own.

The Loops include the Ulnar Loop and the Radial Loop type. The Arches have their subdivisions into Regular Arches and Tented Arches. The Whorls include the Single-cored and Double-cored Whorl, and the Composites have four divisions: Central Pocket Loops,

Lateral Pocket Loops, Twinned Loops and Accidentals,

Further divisions designate the Loops as large, small or medium, and the Whorls as circular or oblong. The Composites, as the name signifies, are a combination of several of the standard forms.

In order to classify fingerprints properly, it is necessary to have clearly in your mind two points; the Core and the Delta. The Core is that part of the print which is the inner central point of the pattern. The Core is the beginning of the pattern, as it were, and the Delta is its conclusion. The latter name is derived from the fact that often two of the lines form in the shape of the Greek "delta." These lines, from the Delta outward, no longer form any definite pattern, and are therefore of no use for classification. Usually the Delta is formed by two ridges joining, but it can also be formed by the divergence of two ridges which had run side by side.

The Core may be a Loop in the center, or it may be several loops. If the Loop is not definite, a spot nearest the center of the formation is marked as the Core; either one or more of unjoined ridges in the center of the Loop.

In the case of Loops, the Core is a spot near the turn of the center ridge. In Loops, some of the ridges make a backward turn, but do not twist. The lines join in one Delta. The ridges may enter on either side, and go out on the same side. There are usually several Loops, surrounding each other.

If the downward slope of the ridges about the Core is from the direction of the little finger toward that of the thumb, it is classified as a Radial Loop. If the downward slope of the ridges about the Core is from the thumb side toward the little finger, the Loop is an Ulnar Loop.

Arches are a simple form of print. The ridges run from one side of the finger to the other, making no backward turns. They have a slight upward curve toward the center. When these ridges are much higher in the center, they are termed Tented Arches instead of Regular Arches Tented Arches, however, do not have Deltas, despite their form.

Whorls are a more complicated form of print. In Whorls, some of the ridges make a turn through at least one complete circuit. They form a series of circles or spirals around the Core, and may have one or two Cores.

Around the Core, the spirals may tend to be oval or almond-shaped, but they become more circular as they recede to the Deltas. Whorls have two Deltas, and they must always be shown on the print in order to get the proper classification. Here is where the rolled print becomes important, because a plain impression will not always show a sufficient surface to make this judgment accurate.





The last classification of prints, the Composite class, includes several divisions.

The Central Pocket Loop type of composite print resembles the Loop more than anything else, but there is a variation in that one or more of the ridges form a spiral around the Core.

When a Loop print has two distinct Loop patterns, then it is classed as a Twinned Loop, under the head of Composites.

Lateral Pocket Loops are similar to Twinned Loops, except that the ridges end on the same side of the Delta, instead of on opposite sides, as in the Twinned Loops.

The last division of Composites is the Accidentals. In this group are listed all sorts of patterns which do not come under any of the previous headings. They may be combinations of all of the previous ones, or any two of them. Although they vary a great deal, all of them can be divided into the regular classifications by proper separation of the ridges.

Each of these groups has its particular specifications, and will be dealt with more fully later in this series of articles. This information, given here, will be used as the basis for our continued study of prints in all their phases. A knowledge of these classes, you can readily see, will be mighty important when we go deeper into the study of prints.

# HE NEEDS 81 TONS OF SUPPLIES A MONTH TO WIN HIS FIGHT...



AMAZING BUT TRUE—IT TAKES 81 TONS OF SUPPLIES A MONTH TO KEEP A SOLDIER OVERSEAS. THAT'S A LARGE ORDER . . AND IT'S GOT TO BE FILLED! HUGE QUANTITIES OF PAPER ARE NEEDED FOR THIS . . . FOR ARMS CONTAINERS, FOR TARGETS, FOOD CARTONS, U.S. ARMY FIELD RATION "K", AND MANY OTHER THINGS.

That's why the government is asking YOU to help that boy overseas by collecting every scrap of waste paper you can. Get your friends to pitch in . . . farm groups . . . interest your whole neighborhood in this drive. Paper is vital to the winning of the war . . . and to prevent a disastrous shortage . . .

GET IN THERE . . . SAVE WASTE PAPER TO SAVE THEIR LIVES!

# VIGNETTES - HOW TO LOSE FRIENDS





VOICE ...





























IN THE NEXT ISSUE



